



2854

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re: Application Ser. No. 10/037,251

: Art Unit 2854

Filed 1/4/02

: Exr. L.J.Evanisko

Inventors Hougham et al

: Atty.Dkt. YOR920010020US1

For: MULTILAYER ARCHITECTURE FOR MICROCONTACT PRINTING STAMPS

RESPONSE TO 8/4/03 OFFICE ACTION

COMMISSIONER FOR PATENTS

P.O.Box 1450

ALEXANDRIA, VA. 22313-1450

Sir:

In response to the 8/4/03 office action kindly amend the above identified application following the

14 enumerated topics in the office action. Amendment instructions are located in attachment "A".

With respect to topics 1 and 2 of the office action, the prosecution in this application is directed to elected claims 1 - 10 and it is requested that claims 11-14 be held in abeyance pending decision on a divisional application.

With respect to topics 3 and 8 concerning the Dow Corning Sylgard, it is advanced as support for reconsideration that applicants' statement is directed to the material siloxane. The material Dow Corning Sylgard is advanced as an example of a suitable siloxane is (Spec page 5).

" The material siloxane is one example of an appropriate material for layer 13.

Commercially available silane material is the material known as Dow Corning Sylgard 184."

Dow Corning Sylgard is well known in this art as indicated in two of the applied references. In the Kumer reference page 2003 in connection with Fig.2 the material appears to be referred to as

"(Dow Corning Silicone Elastomer 184)" and in the Bruno et al reference Col. 1 Para [0003] the

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material appears to be referred to as "-- Sylgard 184 manufactured by Dow Corning Corp.--".

The point being advanced in requesting reconsideration is that the art has accepted this type of description.

With respect to topic 4 concerning the use of Dow Corning in the specification and Dupont in the claims. Examiner's point is well taken. Amendment instructions are provided herewith to conform the claims to the specification.

With respect to topic 5, on claim 5 concerning the change of dependency from claim 2 to claim 3. Amendment instructions are provided herewith

With respect to topics 6 and 7 concerning the rejection of all the claims under 35USC112 involving such concepts that the distinguishing terms do not lend themselves to quantification and the claim language is not clear. It is submitted that the art of record, Kumer, Hilber , Maracus Fugimura and Bruno teaches the general state where layers impart desired physical properties and gives meaning and significance to the terminology. As examples, porosity as a property is needed to retain the material being transferred. Wettability enhancement is a property that is needed to get more of the transfer material to stick to the stamp or stamped location in the time available. This invention may be considered to be advancing the advantages of superimposed layers in a stamp.

Examiner's kind suggestions on claim modification are appreciated however it appears best to hold them until there is closer agreement on relation of the art of record to the claim language.

The following is an illustration of the reading of the independent claims on the specification. .

| | | | |
|----|---|--------------------------|---------------|
| 1 | 1. In microcontact printing wherein | Dwg | Spec |
| | an electronic circuitry pattern on the surface of an | Fig. 1 at A | Page 4 line 7 |
| 2 | elastomeric stamp member is operable in a transfer | pattern 10, | |
| | of a further processing responsive | | |
| 3 | material, to a surface of a substrate, | surface 11, substrate 12 | |
| 4 | the improvement comprising: | | |
| 5 | said elastomeric stamp member having a surface region | layer 13 | page 5 |
| | of a material imparting to said | | |
| 6 | stamp member at least one of the properties of | lines 1 - 11 | |
| | adhesion and wettability enhancement | | |
| 7 | of the material of said circuitry pattern | page 6 lines 1 - 15 | |
| | to said surface region, and, | | |
| 8 | said elastomeric stamp member further having | | |
| | at least one subsurface region, each said | elements 21, 23, 24 | |
| 9 | subsurface region being of a material imparting | | |
| | a particular physical property to said | | |
| 10 | stamp member. | | |

| | | | |
|---|---|--------------|--------------------------------|
| 1 | 7. A microcontact printing stamp, | Fig. 2 | page 7 line 7 - page 8 line 15 |
| 2 | comprising in combination : | | |
| 3 | a body having at least a layer imparting | | |
| | a bulk stiffness and flatness physical property on | substrate 12 | surface 11 |
| 4 | which there is a stamping pattern supporting surface, | | |

5 a stamping pattern layer positioned pattern 10 page 7 lines 7 - 15
on said pattern supporting surface of said body,
6 said stamping pattern layer including
a negative relief stamping pattern in which the
7 spaces between the features of said
stamping pattern are the positive relief embossed
8 portions of the final printing stamp,
9 said stamping pattern layer further being
of an electronic circuitry processable material
10 in which at least one of the physical page 7 line 15 -page 8 line 6
properties of adhesion enhancement and
11 wettability enhancement are imparted.

With respect to topics 9 and 10 claims 1-3 and 7 are rejected as being anticipated by Maracas.

In the reading of Maracas on appellants structure alternate ways of reading of Maracas are advanced.

It is respectfully requested that the holding be reconsidered for the reason that the application of the reference takes applicants disclosure as a road map from which elements with out relation to the invention are assembled. The criteria for 35USC 102 are specific that the teaching has to add up to the invention, that all elements of the invention must be present and used in the same way. Maracas purpose is to be able to use the self assembled monolayer(SAMS) technology resulting in a stamp with a single layer. In contrast applicants may be thought of as

advancing multi layer structures such that if you find a need for a property such as porosity after the layers at the surface are being used, that property can be provided in a subsurface layer through this invention.

With respect to topics 11 to 14 , in topic 13 claims 6 and 10 stand rejected under 35USC103 as unpatentable over Maracus alone as meeting all limitations with an assumption that selection of specific materials would be obvious routine experimentation; and in topic 14 claims 1-10 stand rejected under 35 USC103 as being unpatentable over the preamble of claim 1 as admitted prior art in view of the Fugimora reference.

It is respectfully requested that each rejection under 35USC103 be reconsidered for the reason that each of the supporting assertions do not support the rejection. In the case of each rejection for obviousness under 35USC103 there is a basic element of information that together with a further element of information adds up to the invention. A vital part of the rejection in each case is a speaking to the basic element and a direct setting forth of the motivation combining the parts. It is submitted that motivation is not clearly specified.

In view of the above, the claims are considered to be providing a patentable contribution in the art.

Respectfully submitted,

 11/4/03

Alvin J. Riddles

Reg. No. 17862

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by *Alvin J. Riddles* 11/4/03
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